

# Shopmate™ Series

Issued July 2006 • Index No. DC/12.7

**MIG/Multiprocess Welding  
Power Sources**



## Quick Specs

### Light Industrial Applications

Recreational Vehicle  
Trailer Manufacturing  
MRO — Maintenance/Repair  
Education  
Farm/Home

### Shopmate 300 Processes

MIG (GMAW)  
Flux Cored (FCAW)

### Shopmate 300 DX Processes

MIG (GMAW)  
Flux Cored (FCAW)  
Stick (SMAW)  
DC Lift-Arc™ TIG (GTAW)

**Input Power** 1-Phase Power  
(primary power cord not included)

**Rated Output** 250 A at 30 VDC, 60% Duty Cycle  
300 A at 32 VDC, 40% Duty Cycle

**Amperage Range in CC Mode** 5–400 A

**Max. Open-Circuit Voltage** 80 VDC

**Voltage Range in CV Mode** 10–35 VDC

**Weight** 300: 177 lb (80.3 kg) 300 DX: 177 lb (80.3 kg)

## The Power of Blue.®



### Shopmate 300

Single-phase MIG power source that provides versatility and outstanding arc performance in CV mode (MIG).

### Shopmate 300 DX

Single-phase MIG or DC multiprocess capability for versatility with outstanding arc performance in CV mode (MIG) and CC mode (Stick and TIG).

**Large, dual digital meters** enable the operator to preset weld voltage in CV mode and amperage in the CC mode before striking an arc.

**Arc control** adjusts inductance to optimize MIG arc performance.

**Line voltage compensation** keeps output power constant even if input power varies  $\pm 10\%$ .



Shopmate 300

Shopmate 300 DX

**Built-in 10-pin connector** for direct hookup of Spoolmatic® 15A or 30A spool guns.

**Built-in 14-pin connector** provides quick, direct connection for 14-pin 24 VAC Miller wire feeders and accessories.

**Fan-On-Demand™** operates only when needed reducing noise, power consumption, and the amount of airborne contaminants pulled through the machine.

### Shopmate 300 DX includes:

**Process Selector Switch** “operator-friendly” single process switch eliminates confusion caused by several switch combinations.

**Lift-Arc TIG™** allows DC/TIG starting without the use of high-frequency. Starts the arc without contaminating the weld with tungsten.



Power source is warranted for 3 years, parts and labor.  
Original main power rectified parts are warranted for 5 years.

MADE IN **USA**  
APPLETON, WI



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An Illinois Tool Works Company  
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**Web Site**  
[www.MillerWelds.com](http://www.MillerWelds.com)



# Shopmate™ 300 Specifications (Subject to change without notice.)



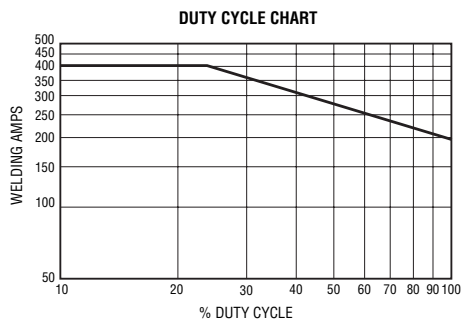
Rated Output	Amperage Range	Voltage Range	Max. Open-Circuit Voltage	Amps Input at Rated Output, 60 Hz				KVA	KW	Dimensions	Net Weight
250 A at 30 VDC, 60% Duty Cycle	5–400 A	10–35 V	80 VDC	208 V	230 V	460 V	575 V	13	11.2	H: 24-1/2 in (622 mm) including lift eye W: 19 in (483 mm) D: 25-1/2 in (648 mm)	177 lb (80.3 kg)

Note: For input conductor and fuse size information consult the Owner's Manual.

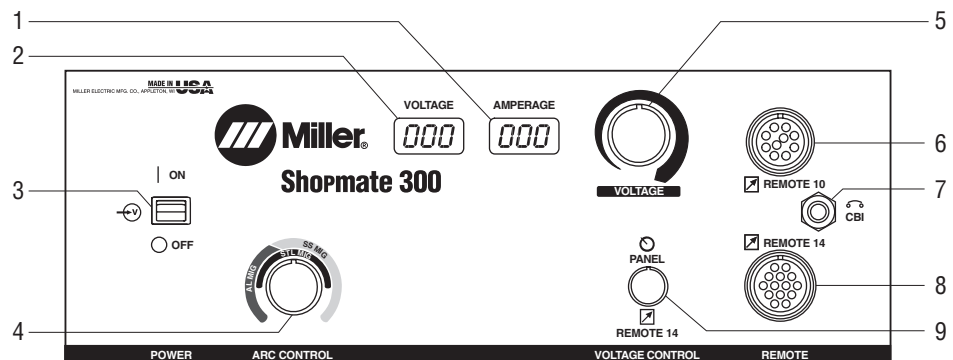


Certified to both the Canadian and U.S. Standards for welding equipment.

## Performance Data



## Control Panel



1. Ammeter
2. Voltmeter
3. Power Switch
4. Arc Control
5. Voltage Adjustment Control

6. Remote 10 Receptacle
7. Supplementary Protector CBI
8. Remote 14 Receptacle
9. Voltage Control Switch

## Arc Control



### Example: Preset for MIG welding with steel wire

Control adjusts inductance for MIG welding. Set Arc Control to desired wire type. Inductance determines the “wetness” of the weld puddle. As setting is increased (rotating Arc Control clockwise), wetness (puddle fluidity) increases. For best results, preset Arc Control to the wire type. Then either increase or decrease setting within wire type scale to make fine adjustment to the welding arc.



# Shopmate™ 300 DX Specifications (Subject to change without notice.)

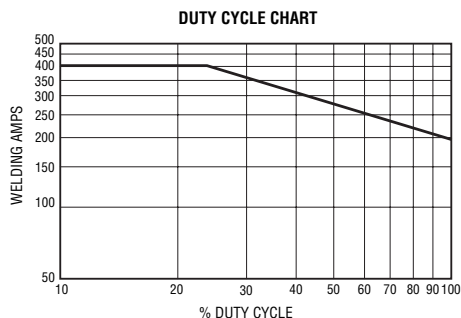


Rated Output	Amperage Range	Voltage Range	Max. Open-Circuit Voltage	Amps Input at Rated Output, 60 Hz						Dimensions	Net Weight
250 A at 30 VDC, 60% Duty Cycle	5–400 A	10–35 V	80 VDC	208 V	230 V	460 V	575 V	KVA	KW	H: 24-1/2 in (622 mm) including lift eye W: 19 in (483 mm) D: 25-1/2 in (648 mm)	177 lb (80.3 kg)
				66	57	29	23	13	11.2		

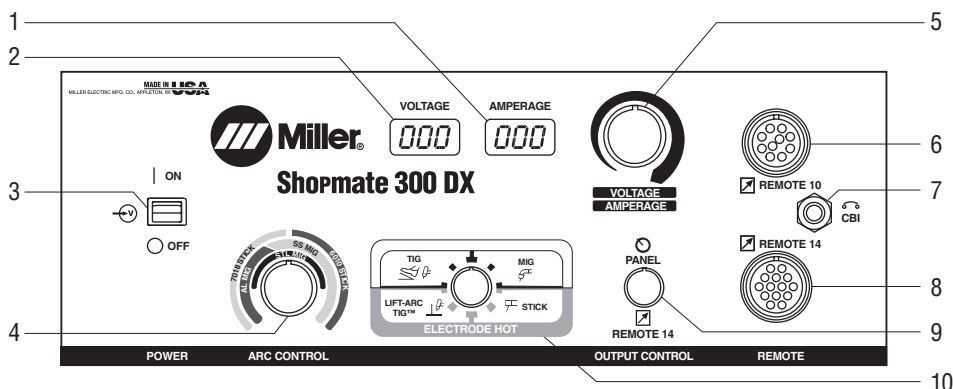
Note: For input conductor and fuse size information consult the Owner's Manual.

Certified to both the Canadian and U.S. Standards for welding equipment.

## Performance Data

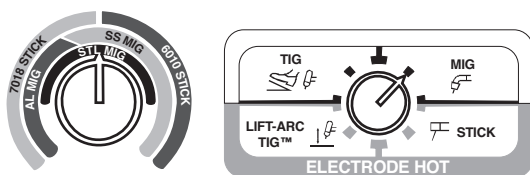


## Control Panel



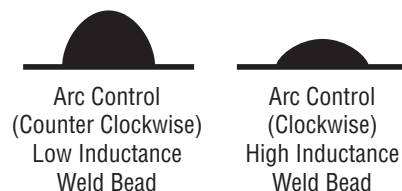
1. Ammeter
2. Voltmeter
3. Power Switch
4. Arc Control
5. Voltage/Amperage Adjustment Control
6. Remote 10 Receptacle
7. Supplementary Protector CBI
8. Remote 14 Receptacle
9. Voltage/Amperage Control Switch Control allows selection of either panel or remote 14 for amperage or voltage control.
10. Mode Switch Switch determines both the process and output On/Off control. Electrode hot areas in gray are "contactor on" positions.

## Arc Control – Inductance/MIG

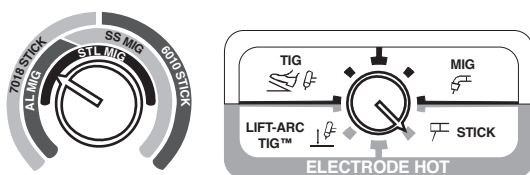


### Example: Preset for MIG process and steel wire

Control adjusts inductance for MIG welding. Set Arc Control to desired wire type. Inductance determines the "wetness" of the weld puddle. As setting is increased (rotating Arc Control clockwise), wetness (puddle fluidity) increases. For best results, preset Arc Control to the wire type. Then either increase or decrease setting within wire type scale to make fine adjustment to the welding arc.



## Arc Control – DIG/Stick



### Example: Stick Mode, 7018 Electrode

Control adjusts Dig when Stick mode is selected on mode switch. Set Arc Control to desired electrode type. For best results, preset Arc Control in middle of the scale for appropriate electrode type. Then either increase or decrease setting within electrode type scale to make fine adjustment to the welding arc.



## Shopmate™ 300 MIG Package Components

### Shopmate 300 MIG Package

#951 056 200(208)/230 V

#951 058 230/460/575 V

#### Comes Complete With:

- Shopmate 300
- 22A wire feeder with Bernard® Q400 15 ft (4.6 m) gun
- MIG Kit #300 150 including:
  - 15 ft (4.6 m) 1/0 work cable with clamp
  - 10 ft (3 m) 1/0 interconnecting cable
  - Ar/CO<sub>2</sub> regulator with flowtube
  - 10 ft (3 m) gas hose
  - Consumable storage box

*Note: MIG Kit can be ordered separately.*



## Shopmate™ 300 Spool Gun Package Components

### Shopmate 300 Spool Gun Package

#951 057 200(208)/230 V

#951 059 230/460/575 V

#### Comes Complete With:

- Shopmate 300
- Spoolmatic® 30A spool gun
- Spool Gun Kit #300 151 including:
  - 15 ft (4.6 m) 1/0 work cable with clamp
  - Ar/CO<sub>2</sub> regulator with flowtube
  - Consumable storage box

*Note: Spool Gun Kit can be ordered separately.*





## Upgrade Benefits

Features	Millermatic® 251	Shopmate 300	Shopmate 300 DX	Millermatic® 350	Millermatic® 350P
Input Voltage	1-Phase	1-Phase	1-Phase <b>Upgrade</b>	1-Phase/3-Phase	1-Phase/3-Phase
Input Amperage at Rated Output	42 A, 230 VAC (1-Phase)	57 A, 230 VAC (1-Phase)	57 A, 230 VAC (1-Phase)	61 A, 230 VAC (1-Phase)	61 A, 230 VAC (1-Phase)
Rated Output	200 A at 60% <b>Upgrade</b>	250 A at 60%	250 A at 60% <b>Upgrade</b>	300 A at 60%	300 A at 60%
Process	MIG	MIG <b>Upgrade</b>	MIG, DC Stick, DC TIG	MIG <b>Upgrade</b>	MIG, Pulsed MIG
Arc Control	Active Arc Stabilizer <b>Upgrade</b>	MIG — variable inductance <b>Upgrade</b>	MIG — variable inductance Stick — variable DIG	MIG — inductance control	MIG — inductance control Pulsed — SharpArc® (arc width)
Wirefeed System	All in one, 2 drive rolls <b>Upgrade</b>	14-pin remote Miller wire feeder	14-pin remote Miller wire feeder	All in one, angled 4 drive rolls	All in one, angled 4 drive rolls

## Genuine Miller Accessories

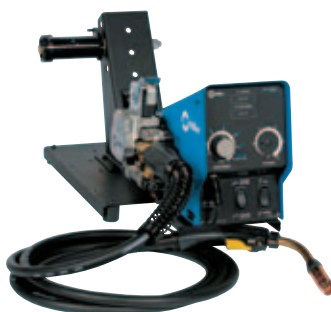
### Wire Feeders



**22A #193 066**

**24A #195 112**

Simple, reliable, 24 VAC constant-speed semiautomatic wire feeder, best suited for small diameter wires. Accommodates up to 60 lb (27.2 kg) spool of welding wire when using optional wire reel assembly. 24A includes remote voltage and four gear-driven drive rolls for larger wire sizes. 22A and 24A wire feeders come with FREE Bernard® Q™-Gun! See Lit. Index No. M/11.0.



#### NEW! 75 Series

**S-75S #300 114** Standard Speed

**S-75D #300 116** Standard Speed

**S-75DX #300 118** Standard Speed

**S-75DXA #300 120** Standard Speed

*for use with .035 in aluminum wire*

**S-75DXA #300 121** Standard Speed

*for use with 3/64 in aluminum wire*

**D-75S #300 174** Standard Speed

**D-75D #300 175** Standard Speed

**D-75DX #300 176** Standard Speed

Wire feeder features **NEW! Accu-Mate™** connection and PD (Precision Drive) wire feed assembly. Handles a variety of wire diameters up to 1/8 in. Comes with FREE Bernard® Q™-Gun! New dual wire models include two FREE Q-Guns. See Lit. Index No. M/3.5.



#### XR™-Control #181 538

Push-pull wire feed system offers unparalleled performance for aluminum MIG welding. See Lit. Index No. M/1.7.



#### Shopmate™ 300 MIG Kit #300 150

Includes 15 ft (4.6 m) 1/0 work cable with clamp, 10 ft (3 m) 1/0 interconnecting cable, Ar/CO<sub>2</sub> regulator with flowtube, 10 ft (3 m) gas hose and consumable storage box.



#### Spoolmatic® 15A Spool Gun #195 156

#### Spoolmatic® 30A Spool Gun #130 831

Ideal for aluminum welding jobs. 200 amp, 100% duty cycle, air-cooled, 1 lb spool gun with your choice of 15 ft (4.6 m) or 30 ft (9.1 m) cable assembly. For detailed information, see Spoolmatic literature, Index No. M/1.5.



#### Shopmate™ 300 Spool Gun Kit #300 151

Includes 15 ft (4.6 m) 1/0 work cable with clamp, Ar/CO<sub>2</sub> regulator with flowtube, and consumable storage box.

### Remote Controls and Switches



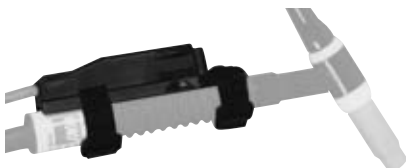
#### RMLS-14 #129 337

Momentary- and maintained-contact rocker switch for contactor control. Push forward for maintained contact and back for momentary contact. Includes 20 ft (6 m) cord and 14-pin plug.



#### RCC-14 Remote Contactor and Current Control #151 086

Rotary-motion (side to side) fingertip control. Fastens to TIG torch using two Velcro strips. Allows complete current and contactor control at operator's fingertips. Includes 28 ft (8.5 m) cord and plug.



#### RCCS-14 Remote Contactor and Current Control #043 688

Up-and-down rotary-motion fingertip control. Great for applications that require a finer amperage control. Includes 28 ft (8.5 m) control cord.



#### RHC-14 Hand Control

#129 340 20 ft (6 m) cord  
Miniature hand control with 14-pin plug for remote current and contactor control. Dimensions: 4 x 4 x 3-1/4 in (102 x 102 x 82 mm).



#### RFCS-14 Foot Control #043 554

Heavy-duty foot current and contactor control. Includes 20 ft (6 m) cord and 14-pin plug.

#### Extension Cables for 14-Pin Plugs to 14-Pin Sockets

#122 973 25 ft (7.6 m)

#122 974 50 ft (15.2 m)

#122 975 75 ft (22.8 m)

This extension cord makes a direct connection between the power source and the accessory control or wire feeder. No messy splicing or adapting required.



#### No. 2 Stick Cable Set

#195 196 15 ft (4.6 m)

Consists of 15 ft (4.6 m) No. 2 electrode cable and holder, and 15 ft (4.6 m) work cable and clamp. 200 A, 100% duty cycle.

#### No. 2 Stick Cable Set

#195 195 50 ft (15.2 m)

Consists of 50 ft (15.2 m) No. 2 electrode cable and holder, and 50 ft (15.2 m) work cable and clamp. 200 A, 100% duty cycle.



#### Shopmate™ 300 Running Gear/Dual Cylinder Rack #300 145

The large 10 in (254 mm) rear wheels and 4 in (102 mm) front casters on this running gear provide excellent mobility on the shop floor, making it easier to move the power source around and over cables and cracks. Very easy to install. Handles double as weld cable holder. Holds two cylinders.

### TIG (GTAW) Torches



#### Weldcraft® TIG Torches

The Weldcraft line of TIG torches complements the most popular TIG power source line available today. The Weldcraft torch line includes both air-cooled and water-cooled models. Available with genuine Weldcraft parts.

#### Air-Cooled Torch #WTP17VRM

150 amp air-cooled TIG torch with valve, flowmeter and 25 ft (7.6 m) cables.

#### Air-Cooled Torch #WTP26VRM

200 amp air-cooled TIG torch with valve, flowmeter and 25 ft (7.6 m) cables.

#### TIG (Gas Tungsten Arc Welding) Handbook #170 555

To order, call the Miller Literature Distribution Center at 1-920-751-2120, or FAX 1-920-751-2121. A comprehensive, text on all aspects of the TIG process.



## Ordering Information

Equipment and Options	Stock No.	Description	Qty.	Price
<b>Power Source</b>				
<b>Shopmate™ 300</b> (primary power cord not included)	<b>#907 313</b>	200(208)/230 V, 60 Hz		
	<b>#907 314</b>	230/460/575 V, 60 Hz		
<b>Shopmate™ 300 DX</b> (primary power cord not included)	<b>#907 315</b>	200(208)/230 V, 60 Hz		
	<b>#907 316</b>	230/460/575 V, 60 Hz		
<b>Shopmate™ 300 MIG Package</b> (primary power cord not included)	<b>#951 056</b>	200(208)/230 V, 60 Hz model with 22A wire feeder, Bernard® Gun and MIG Kit.		
	<b>#951 058</b>	230/460/575 V, 60 Hz model with 22A wire feeder, Bernard® Gun and MIG Kit.		
<b>Shopmate™ 300 Spool Gun Package</b> (primary power cord not included)	<b>#951 057</b>	200(208)/230 V, 60 Hz model with Spoolmatic® 30A spool gun and Spool Gun Kit.		
	<b>#951 059</b>	230/460/575 V, 60 Hz model with Spoolmatic® 30A spool gun and Spool Gun Kit.		
<b>Accessories</b>				
Shopmate™ 300 MIG Kit	<b>#300 150</b>	15 ft (4.6 m) 1/0 work cable with clamp, 10 ft (3 m) 1/0 interconnecting cable, regulator with flowtube, 10 ft (3 m) gas hose and consumable storage box		
Shopmate™ 300 Spool Gun Kit	<b>#300 151</b>	15 ft (4.6 m) 1/0 work cable with clamp, regulator with flowtube, and consumable storage box		
Standard Running Gear/ Dual Cylinder Rack	<b>#300 145</b>			
<b>Wire Feeders/Guns</b>				
22A	<b>#193 066</b>	See Lit. Index No. M/11.0		
24A	<b>#195 112</b>	See Lit. Index No. M/11.0		
75 Series		See page 5		
XR™-Control	<b>#181 538</b>	See Lit. Index No. M/1.7		
Spoolmatic® 15A	<b>#195 156</b>			
Spoolmatic® 30A	<b>#130 831</b>			
<b>Remote Controls</b>				
RMLS-14	<b>#129 337</b>	Rocker switch		
RCC-14	<b>#151 086</b>	Fingertip control (side to side)		
RCCS-14	<b>#043 688</b>	Fingertip control (up and down)		
RHC-14	<b>#129 340</b>	Hand control w/20 ft (6 m) cord and 14-pin plug		
RFCS-14	<b>#043 554</b>	Foot control		
Extension Cables		See page 6		
No. 2 Stick Cable Set	<b>#195 196</b>	15 ft. (4.6 m)		
No. 2 Stick Cable Set	<b>#195 195</b>	50 ft. (15.2 m)		
<b>TIG Welding</b>				
Weldcraft® TIG Torches	<b>#WTP17VRM</b>	150 A, 25 ft. (7.6 m) air-cooled with valve and flowmeter		
	<b>#WTP26VRM</b>	200 A, 25 ft. (7.6 m) air-cooled with valve and flowmeter		
<b>Educational Resources</b>				
TIG (Gas Tungsten Arc Welding) Handbook	<b>#170 555</b>			

Date:

Total Quoted Price:



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